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# (12) United States Patent Dryer et al.

## (54) DEVICES AND METHODS FOR MEASURING USING AUGMENTED REALITY

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- (51) Int. Cl.

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- (52) **U.S. CI.**CPC ....... *G01B 11/026* (2013.01); *G06F 3/04842* (2013.01); *G06F 3/04847* (2013.01); (Continued)

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#### (58) Field of Classification Search

None

See application file for complete search history.

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#### (57) ABSTRACT

An electronic device: displays a field of view of a camera at a first magnification and updates the displayed field of view over time based on changes detected by the camera. The field of view includes a view of a three-dimensional space. In response to a first touch input, the device adds a measurement point at a first location in the displayed field of view that corresponds to a first location in the three-dimensional space. As the camera moves, the device displays the measurement point at a location in the displayed field of view that corresponds to the first location in the threedimensional space. In response to a second touch input corresponding to a current location of the measurement point in the displayed field of view, the device enlarges display of the displayed field of view around the measurement point from the first magnification to a second, greater magnification.

#### 27 Claims, 138 Drawing Sheets

